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GoddardView

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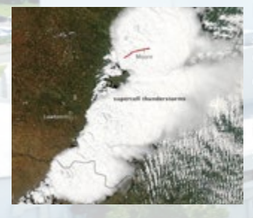
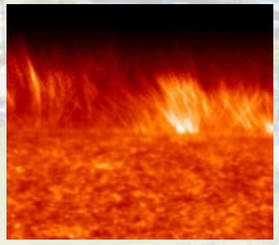


NASA and NOAA Satellites See Storm System that Created the Moore, Oklahoma Tornado
On May 20, 2013 NASA and NOAA satellites were monitoring the weather system that generated severe weather in the south central United States and spawned the Moore, Oklahoma tornado. Click on the image for more information.

Improving Our View of the Sun
In late June 2013, NASA will launch a new set of eyes to offer the most detailed look ever of the sun's lower atmosphere, called the interface region. IRIS's images will be three to four times as detailed as the images from the Solar Dynamics Observatory To learn more, click on the image.



HS3 Mission Aircraft to Double Team 2013 Hurricane Season
During this year's hurricane season, NASA will double team on research with two unmanned Global Hawk aircraft flying over storms that develop during the peak of the season. Explore more by clicking on the picture.

Experience Life@Goddard
Discover interviews about what Goddard people do on the job, how they support our mission and what keeps them coming back to work. Read stories about the activities our colleagues engage in outside the gates. Click the picture to start exploring.

On the cover: NASA commercial space partner Orbital Sciences Corporation launched its Antares rocket on Sunday, April 21, from the new Mid-Atlantic Regional Spaceport Pad-0A at the Wallops Flight Facility.
Photo credit: NASA/Wallops/Chris Perry and Thom Rogers

GoddardView

Goddard View is an official publication of NASA's Goddard Space Flight Center. Goddard View showcases people and achievements in the Goddard community that support Goddard's mission to explore, discover, and understand our dynamic universe. Goddard View is published weekly by the Office of Communications.

Please submit contributions to the editor via e-mail at john.m.putman@nasa.gov. Ideas for new stories are welcome but will be published as space allows. All submissions are subject to editing.

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WALLOPS LAUNCHES CIBER

By: Keith Koehler

A Black Brant XII suborbital rocket carrying the Cosmic Infrared Background ExpeRiment was successfully launched at 11:05 p.m. on June 5 from NASA's launch range at the Wallops Flight Facility in Virginia.

With CIBER, scientists are studying when the first stars and galaxies formed in the universe and how brightly they burned their nuclear fuel. Jamie Bock, CIBER principal investigator from the California Institute of Technology, reported that good data was received from the payload.

CIBER was lofted to an altitude of approximately 358 miles above the Atlantic Ocean. CIBER will not be recovered, as planned.

The Black Brant XII rocket was launched under clear skies. The launch was reportedly seen from as far away as central New Jersey, southwestern Pennsylvania and northeastern North Carolina.

The next rocket launch from Wallops is a Terrier-Orion sounding rocket between 5:30 and 10 a.m., June 20. The rocket will be carrying experiments developed by participants in the RockOn and RockSat-C programs conducted jointly with the Colorado and Virginia Space Grant Consortia. ■

Above: CIBER lifts off aboard a Black Brant XII suborbital rocket. Photo credit: NASA

> “Biking gets people outside talking to one another.”

YELLOW BIKES AROUND GODDARD

By: Elizabeth M. Jarrell

Not many training projects turn into reality, but that is exactly what happened to the Goddard team attending the yearlong leadership training program “Foundations of Influence, Relationships, Success and Teamwork.” Goddard sent a team of five to the FIRST program, which totals 40 participants chosen from across the agency. Goddard’s team consisted of John Gaebler, Regina Keegan, Alissa Mitchell, Joel Parker, and Sophia Qian.

The Goddard FIRST team’s final project was laying the groundwork for implementing a bike share program known as “Bikes Around Goddard,” which would provide bikes for transportation on center. “Biking gets people outside talking to one another,” said team member Parker. “Plus, it is good exercise.”

“The GOES-R project already had five Rugged Cycles bikes and loaned us one to try for a year,” said Gaebler. “This cruiser is a sturdy, basic design meant for daily use. It’s weatherproof because there is no chain, which also cuts down on maintenance.” Other cool features about this bike are the solid polyurethane tires that never go flat, and an adjustable seat height. The bright yellow frame easily identifies a bike as part of the program.

Each bike costs just under $1,000, but, being airless and chainless, there are virtually no maintenance costs. Gaebler thoroughly inspected a bike at Glenn Research Center that had been stored outside for a full year only to find a tiny bit of rust on one screw head. “They are the tank of bikes,” he said.

After deciding to use the same Rugged Cycles bikes, the Goddard FIRST team researched other bike share programs at Johnson Space Center, the Glenn Research Center, and Sandia Labs in New Mexico. They also contacted other organizations on center that would be involved in implementing the program. Everyone concluded that the existing bike racks around center would be sufficient to kick-off the program, that bikes would only be used within the main gates, and that current traffic rules would apply including a helmet requirement for riders under 16. “Obey the stop signs, signal before turns and be aware of your surroundings,” summarizes Parker. “But car drivers need to know that there will be more bikes around.”

The FIRST team gauged the Goddard community’s interest in a bike-sharing program while manning a bike safety booth at the last open house (Do you mean Celebrate Goddard?). “We attached a stationary bike to a blender so that people could make their own smoothies by riding the bike,” says Parker. “There are now companies making blender bikes.” They found quite a lot of interest both in the smoothies and in the program.

For funding, the team asked different projects to each sponsor a few bikes to put toward a community bike share. Approximately ten projects agreed to fund between one to five bikes. “Our goal was to have 30 bikes for the kickoff,” said Gaebler. “We are placing two to three bikes at each of the most populous buildings.”

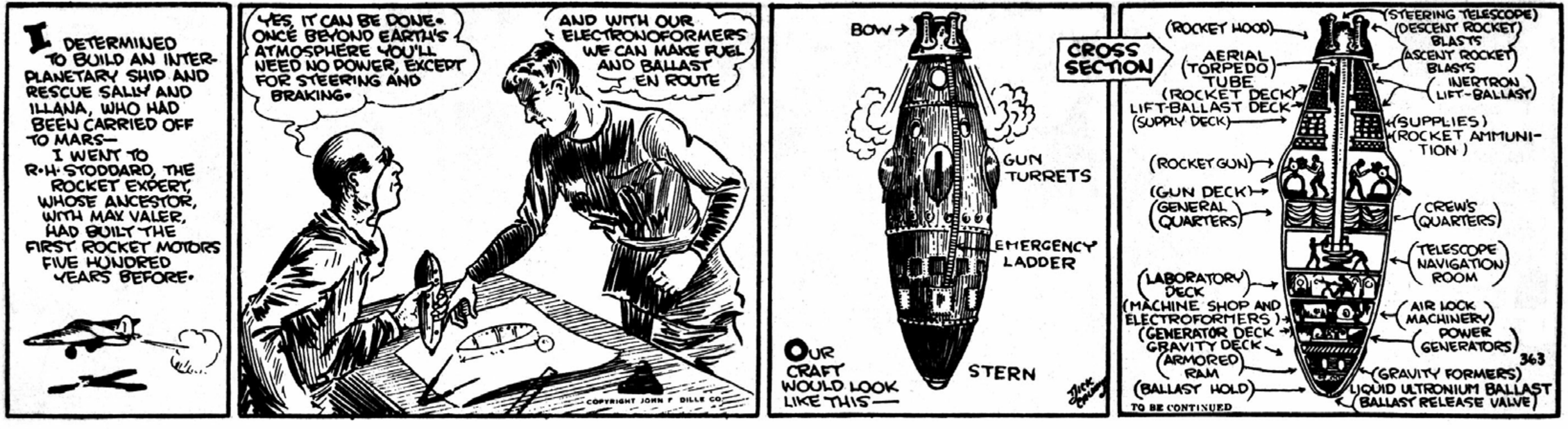
After all this legwork, the team contacted the Logistics and Transportation Management Branch head Tom Weisz, who endorsed the idea and will be managing the program. “It’s only through the FIRST team’s efforts and research that this bike share program is possible,” says Weisz. The program was approved by center management last December and was launched on Earth Day, April 22, 2013.

“Green transportation, which can include bike sharing, is an important part of creating an environmentally-friendly workplace at Goddard,” said Weisz. “Now ordering a bike through Goddard’s supply system is as easy as ordering pens or pencils.”

Neither Gaebler, Parker nor Weisz currently own a personal bike. However, all of them are excited about participating in the bike share program. The NASA FIRST team is especially pleased that their research project became a reality, to be enjoyed by all on center. ■

Opposite: Goddard FIRST program member, John Gaebler, researched and inspected several bikes to determine the Rugged Cycles are substantial for Goddard’s bike share program. Photo provided by John Gaebler

Above: Joel Parker, Regina Keegan, John Gaebler, and Alissa Mitchell (on bike). Photo provided by John Gaebler



BUCK ROGERS IN THE GODDARD LIBRARY

By: Michael Chesnes, Lisa Knight, Lauren Martino, Tonia Reynolds-Pope, Lee Wittenstein

It's not every day that Goddard librarians cross paths with a science fiction legend. When Diane McDevitt and Ralph Pope visited the NASA Goddard Library last December, they posed a challenge to the Goddard librarians. McDevitt and Pope wanted to know if the librarians could find a link between Robert Goddard and McDevitt's grandfather Philip Nowlan, creator of the famous space traveler Buck Rogers.

Buck Rogers was aided in his 25th century adventures by the inventor Dr. Huer, who at one point was called Dr. Stoddard. When Robert Goddard and his wife Esther visited the 1934 World's Fair in Chicago, they noted an actor portraying Dr. Huer, who appeared to be based on Dr. Goddard. McDevitt and Pope especially wanted the librarians to find information related to that encounter. Esther Goddard wrote that her husband enjoyed the association with Dr. Huer and the couple went out of their way to visit the 1934 Buck Rogers exhibit. Afterwards, whenever there was a problem with Goddard's experiments, she would quote Dr. Huer: "Now don't you worry, the old doctor will take care of that."

As one of the prototypes of the heroic American astronaut, Buck Rogers has had a phenomenally long-lived and successful run. Nowlan introduced him in the August, 1928 issue of the pulp magazine Amazing Stories and continued Rogers' adventures in a long-syndicated comic strip during its early years in the 1930s. During Rogers' heyday in the 1930s and 1940s, he was the leading figure in a science fiction boom. His career extended to radio, film, toys, and eventually television, establishing him in the popular American consciousness for over half a century as a catch phrase for futuristic technology and an inspiration for the creators of other fictional space adventurers.

While the Goddard librarians weren't able to find evidence of a direct connection between Philip Nowlan and Robert Goddard, they found everything they could about the early history of Buck Rogers, his representation at the 1933-34 Century of Progress World's Fair, and information about cutting-edge technology from Robert Goddard and others that was available to Nowlan early in his career.

The librarians searched subscription databases, and databases they could access at the nearby University of Maryland, as well as sources publicly available on the Internet. They also contacted the Goddard archives at Clark University, where Dr. Goddard taught, and the University of Illinois at Chicago, which holds official records of the Century of Progress.

Even though there is no evidence that Dr. Goddard and Mr. Nowlan ever met, Dr. Goddard and his works were a significant influence on Nowlan. One of the Buck Rogers comic strips renamed Dr. Huer as Dr. Stoddard, and explained that centuries ago one of Stoddard's ancestors invented the liquid-fueled rocket. Goddard's rocket launches attracted extensive media coverage during the 1920s.

A decade before the creation of Buck Rogers, newspaper articles predicted that Goddard's rocket could one day reach the Moon. Nowlan worked for a news clipping service, and would have seen these articles. Dr. Goddard was also covered by popular scientific magazines from the 1920s, such as Modern Mechanix, which contained many ideas for advances in robotics, communications, and transportation that found their way into Nowlan's work. Dr. Goddard's own patents and writings for general audiences reflected interests beyond rocketry. His patent for an ion generator especially looks like an inspiration for science fiction devices.

Although this project was a departure from the Library's typical scientific and technical research, McDevitt and Pope were delighted that the team "understood the connection between the space program and science fiction and pitched in with gusto." The research team plans to share their experiences with librarians beyond Goddard with a formal journal article and conference poster presentation. The Buck Rogers project provides a fantastic example of the NASA Goddard Library's teamwork, professionalism, and persistence in solving any research problem.

As for McDevitt and Pope, they couldn't be happier with the results of the Library's research. "Although separated by time," McDevitt notes, "Phil Nowlan would be very proud of this latest generation of Goddard's research team and their impeccable work. They have certainly performed at a high altitude of excellence."

Sharing Nowlan's legacy with the public is a labor of love for McDevitt and Pope, and they are just getting started. They envision a potential "Pioneers of Science Fiction" educational program or exhibit at the Goddard Visitor Center as the perfect way to highlight the relationship between science fiction and space exploration. A campaign to name an astronomical object or planetary feature after Nowlan is in the works and a biographical film or play may be in the future. Keep up with all the latest developments by following Philip Nowlan on Twitter. ■

Above: The top strip features Dr. Stoddard, the character based on Robert Goddard. Image credits: Buck Rogers comic strip written by Philip Nowlan, illustrated by Dick Calkins. Copyright Nowlan Family Trust, 1930. Courtesy of the Nowlan Family Trust. Buck Rogers™ is a trademark of the Nowlan Family Trust 2009.

Below: The library research team. Clockwise from top left: Lee Wittenstein, Tonia Reynolds-Pope, Michael Chesnes, Lisa Knight, Lauren Martino. Photo credit: NASA/Goddard/Debora McCallum

On a typical Thursday, Goddard employees might get a glimpse of the Goddard taxi or a flock of geese. One thing they can always expect to spot, however, is the Twin Springs Fruit Farm truck.

Tucked away in the parking lot across from Building 8, the fruit truck braves all seasons on Thursdays from 9:00 a.m. to 2:00 p.m. to serve the Orrtanna, Pa. farm's best.

Goddard employees can find mountains of ruby red strawberries, cardboard boxes piled high with crisp heads of lettuce, or spring onions so fresh from the farm that some may still have specks of dirt.

It's that wide variety of natural, untouched fruits and vegetables that Twin Springs Fruit Farm sales manager Marty Jolin said keeps employees coming back.

"The customers are great here and like to explore, especially with food," said Jolin, who has worked at the Goddard truck for three years. "I think we have a good selection for that to happen."

Farm truck owner Aubrey King said the fresh produce also appeals to employees who can tell the difference between an apple grown fresh on a local farm and one picked out of the pile at the grocery store. "The same things like peaches and apples are pretty much popular everywhere, and you just have to go to a [grocery] market to get them," King said. "But we have some very unique and perishable items you can only find at a store in very commercial forms."

Goddard employees know they won't find the truck selling strawberries from California in December or onions from Texas in May, a feature Jolin said the customers appreciate.

"This whole area is very educated. They appreciate the seasonal changes and the produce that changes with it," Jolin said.

The farm has built a strong following at Goddard since former Goddard Employees Welfare Association storeowner Melvin Kurtz recruited them nearly 30 years ago.

"This market is definitely popular," code 672 employee Robert Candey said. "I've heard of people outside [Goddard] saying they wish they could come here."

Although the fruit truck visits other area markets in the Washington, D.C. area throughout the week, Jolin said there's a core group of customers at the Goddard location. "It's pretty much the same people here every week," Jolin said. "It's an exclusive bunch."

Code 279 employee Don Talbot has been coming to the market since it first arrived and enjoys buying the different types of apples so much, he has talked to Jolin about growing his own apple trees. "I've gotten store apples that are nowhere near like their apples," Talbot said. "It's healthy food, I've learned a lot, and it's definitely a great thing to have [on campus.]"

King said although the farmers build relationships with the clients at all of the locations, the core group of regulars makes the Goddard location particularly special. "It's a very good clientele with interesting people," King said. "You see the same people every week, and we get familiar with our customers [at Goddard] more so than other customers."

Julin said the farmers might be able to build relationships with the Goddard employees because of one very important common interest.

"The fact that they're NASA employees can be a little intimidating, but I think for us farmers we're pretty science-oriented, too," Julin said. "I think that's one of the reasons we enjoy coming here." ■

Above: Goddard employees stop by the farm truck, which parks on the campus every Thursday. Photo credit: NASA/Goddard/Rebecca Roth

THE RIPE STUFF

By: Claire Saravia

A group of over 20 employees from diverse departments, ranging from mechanical engineering to public affairs, delivered two-minute elevator pitches in rapid-fire succession on May 20. The goal was to share information with a new circle of people before a bell rang. Then it was time to move on to another person and do it all over again.

The employees weren't participating in a round of musical chairs, but rather a speed networking event set up by the Code 300 Diversity and Inclusion Committee to encourage interaction among Goddard employees.

After increasing in popularity among professionals all over the world, speed networking arrived at Goddard as a small group project in Leadership Development and Excellence in Management level C training in 2010. At the end of the course, one of the team members took the concept to the Safety and Mission Assurance Directorate and asked their newly forming Diversity and Inclusion Committee to develop it for directorate and center-wide use.

SMA sponsored several speed networking events internally before developing a repeatable process and self-contained speed networking kit. It wasn't long before other codes, including 200, 400 and 700, were being briefed about the new networking style. Five speed networking events were held internally in Code 300 and between Code 300 and other Goddard organizations in 2011.

In 2012, SMA lead a speed networking event during the Center's D&I committee retreat and helped the Goddard Day committee to host one during their event. In 2013, SMA is working with the D&I office to offer speed networking center-wide several times each year.

Workmanship Standards Program manager Jeannette Plante said the room was arranged to ensure employees switched partners quickly, allowing them to establish personal connections and reduce communication barriers.

Laura Betz, a writer in the Office of Communications, said she enjoyed the opportunity to celebrate the different jobs people hold at Goddard. "It was really worthwhile to meet other co-workers I would have never had the chance to come into contact with," said Betz. "I thought it was interesting to hear about the different roles and what brought them here."

Speed networking provides a low-pressure way to meet a number of Goddard co-workers in a relatively short time. The events can be structured to promote networking within or across organizational units. In addition, there is great flexibility in identifying the participants to invite. For example, event organizers can structure an event to encourage participation with a mix of center managers/leaders, scientists and engineers or an intra-organizational event may be planned to enhance work relationships and collaboration. Service organizations may elect to host events with their customers. This networking can help improve communications. Participants welcome the opportunity to connect with the larger Goddard family. It is a fun way to meet others.

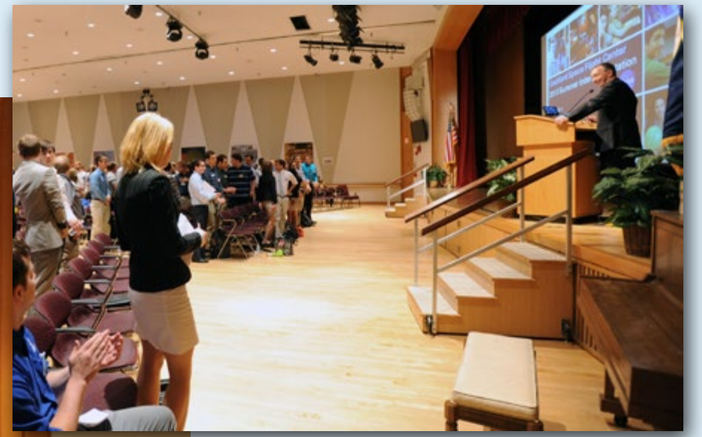
After the positive turnout at the latest event, speed networking is taking Goddard by storm, serving as a communication tool between employees who would normally not cross paths. ■

SPEED NETWORKING AND BEYOND

By: Shamara Thornton

GODDARD WELCOMES SUMMER INTERNS

By: Crystal Garner, Talya Lerner, Sawyer Rosenstein



Jason McCracken traveled nearly 50 hours from Montana to “blow the minds of the youth.”

An education intern from Montana State University, McCracken will spend the summer at Goddard.

McCracken joins nearly 400 students interning at Goddard, selected from approximately 6,000 high school, college and graduate school students, as well as educators. Participants will gain real-world experience while working on current NASA projects and missions. During their internships, students will have the chance to meet scientists, technicians, engineers and even a Nobel laureate.

First-time intern Joel Strothers, from Brooklyn, N.Y., will spend his summer studying heliophysics, the study of interactions between Earth and the sun. However, Strothers hopes to take away more than just experience and information on the sun.

“I want to … find my niche in the NASA community,” he said.

Not every intern is new to Goddard. Brandt Schwer, a junior at the University of Maryland, is a returning mechanical engineering intern from Riva, Md.

“I worked on this project two years ago,” Schwer said. “It will be interesting to see how far the project has progressed. I want to gain experience that I can’t from the classroom.”

The projects are not the only things that have come a long way.

Interns come from around the world to join the nation’s largest grouping of scientists and engineers. Omar Salama, originally from Egypt, graduated this past year from The Ohio State University.

“I want to learn more than I ever hoped,” Salama said. Salama measured soil patterns as part of a NASA project, and was asked to intern at Goddard this summer.

The poster session at the beginning of August is one of the highlights of the internship program at NASA Goddard. This event allows the students to present the projects they will have worked on for nearly 10 weeks to Goddard employees.

The main intern session is set to conclude Aug. 9. ■

Photo credit: NASA/Goddard/Debora McCallum

OUTSIDE GODDARD

By: Elizabeth M. Jarrell

THINKING INSIDE THE BOX

According to program support manager and cat rescuer Mindy Deyarmin, sometimes you have to think outside the box to get a cat to go inside the box. "The number one reason people give up cats is for urinating outside the litter box. Using a large, plastic storage container makes it impossible for a cat to urinate over the box, which solves the problem," says Deyarmin.

Her rescue efforts began one snowy afternoon in 2001 when she and her daughter found two shivering, stray cats. She has since rescued about 1,000 cats, many at her own expense. A refrigerator magnet affirms her motto: "If someone looks at you long enough, you will feed them." "You can't not take care of a hungry cat that shows up on your doorstep," notes Deyarmin with a smile.

Deyarmin uses a humane trap with a drop door. Once captured, the cats are spayed or neutered and inoculated. Typically, veterinarians mark a feral cat's left ear either with a straight or diagonal cut across the top or a V notch to indicate that the cat has been fixed. Many adult feral cats are unadoptable and are eventually released in new locations.

"To successfully move an unadoptable cat to a new location, you have to isolate them for two weeks after being vetted to ensure they fully recover from surgery. The cats are then placed in a secure, sheltered enclosure for eight weeks where they can see the sky so that they can orient themselves. Then they are released in a new place," she explains. "Many ferals either attach themselves only to the person who feeds them or simply do not care for people. They would not hurt us, they are just totally afraid of us. They would starve to death before they would approach a stranger for food," explains Deyarmin.

Adoptable cats must be carefully socialized, which is also a lengthy and complicated process. Kittens imprint to people and to other animals by eight weeks of age so a feral but young kitten can be socialized. "Cats all have personalities, just like people," she says.

Goldie, a cat Deyarmin trapped some seven years ago, is her biggest success story. Goldie was so afraid of people that she would attack. Now she greets visitors and even allows some to pick her up. "People say ferals cannot be domesticated, but Goldie is one of the nicest cats in my house," she says.

It was not easy. She first trapped, fixed, inoculated, and penned Goldie for eight weeks, after which Deyarmin deemed her to be unadoptable and released her. But Goldie thought otherwise; she came back. She lived outside for four years sharing her cat food with raccoons and even sleeping with them.

"I got tired of feeding 25 raccoons, two foxes, and I don't know how many opossums, in order to feed one cat," says Deyarmin. She enclosed part of her outside porch, made a cat door, and lured Goldie inside where she spent the next eight weeks with a few other cats. Since her return, Goldie steadfastly refuses to go outside anymore.

Deyarmin works with the Patuxent Animal Welfare Society (PAWS), which is affiliated with the Calvert Well Pet Clinic, and depends on donations to support their rescue efforts including spaying or neutering and inoculations. The average cost of spaying or neutering plus shots is about $90, which does not include day-to-day expenses.

Because PAWS does not have a shelter, volunteers foster adoptable rescues in their homes until they can be placed. Unfortunately there are too many cats and not enough homes. Deyarmin has so many adoptable cats waiting to be placed that she has not taken in any in several years.

Deyarmin urges anyone who finds a stray cat to contact a rescue group or consider fostering the cat in their home, which is the cat's best chance. "We're happy to teach people how to foster cats," she says. Rescue groups can also provide behavioral advice and limited assistance in financial hardship cases. "Some cats, like some kids, need a little more guidance. We will do everything we can to help someone keep their animal. It's much easier on the cats if the owners are able to keep them," Deyarmin said.

For Deyarmin, it is all about saving the cats. ■

Center: Deyarmin with her cat, Goldie. Photo provided by Mindy Deyarmin